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Comptroller General
of the United States

1109191

Washington, D.C. 20548

Decision

Matter of: Aerospace Engineering and Support, Inc.

File: B-258546

Date: January 13, 1995

Stan Florence for the protester.
David H. Doro, Esq., Department of the Air Force, for the agency.
Christine F. Davis, Esq., and James A. Spangenberg, Esq., Office of the General Counsel, GAO, participated in the preparation of the decision.

DIGEST

Agency properly awarded a sole-source contract to the only source capable of providing a component of the main landing gear wheel and brake assembly of the F-15 aircraft, where that source owns the engineering data for the assembly and all its components, without which the agency could not evaluate the acceptability of the protester's proposal to develop and manufacture its own component.

DECISION

Aerospace Engineering and Support, Inc. (AES) protests the sole-source award of a contract to Allied Signal, Inc. under request for proposals (RFP) No. F42630-94-R-67343, issued by the Department of the Air Force for a quantity of thermal fused plugs for the F-15 aircraft. AES protests that the Air Force improperly denied it an opportunity to compete for this requirement.

We deny the protest.

The F-15 thermal fused plug operates within the main landing gear wheel and brake assembly of the F-15 aircraft. The plug is thermally activated in response to heat generated by the aircraft's brake during landing. Heat from the brake causes pressure to mount in the tires of the aircraft, and the plug is designed to deflate the tires within a given temperature range. If the plug activates below that temperature range, causing an unplanned deflation of the tires, the entire wheel assembly could be lost during landing. If the plug activates above that temperature range, the shortcoming could cause the tires, or the entire

wheel assembly, to explode. Either malfunction could result in severe equipment damage and possible loss of life.

The prime developer of the F-15 aircraft is McDonnell Douglas Corporation; Allied, a subcontractor, is the original equipment manufacture (OEM) of the F-15 wheel and brake assembly. Allied developed the assembly without the use of government funds and owns the engineering data for the assembly and all related components, including the fused plug. As of June 28, 1994, Allied has declined to sell its proprietary data rights.

In 1989, Jay-Em Aerospace Corporation sought source approval for its own F-15 wheel assembly and related components, which it developed through reverse engineering. On August 18, 1989, the Air Force approved Jay-Em as a qualified source for the wheel assembly and its components. Lacking OEM technical data for evaluation purposes, the Air Force's determination rested upon a review of Jay-Em's technical data package, and a consideration of Jay-Em's experience in manufacturing wheel and brake assemblies for other aircraft, i.e., "qualification by similarity."[1] The Air Force did not require Jay-Em's wheel assembly to undergo qualification testing. Jay-Em was subsequently awarded two contracts for a quantity of F-15 fused plugs.

In March 1991, Air Force engineers tested a random sample of Jay-Em production unit plugs and a control set of Allied plugs as a basis for comparing certain physical and chemical characteristics. Through these tests, the Air Force discovered that the Jay-Em plugs deviated from the Allied plugs, both in their physical dimensions and their thermal responses. The Air Force determined that these inconsistencies might prevent the Jay-Em plugs from activating properly during landing, creating a potential for catastrophic loss. As a result, the Air Force revoked Jay-Em's source approval for the plugs (and the entire wheel assembly) until the contractor was able to demonstrate--through dynamic, operational testing of the entire wheel assembly--that any deviations in the wheel or its components would not jeopardize safety. The Air Force concluded that, "[t]he approval of Jay-Em without requirement for full

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[1]The agency used a standard solicitation clause, entitled "Specified Standard for Qualification" to authorize "qualification by similarity," which waives the qualification testing requirement if the contractor has previously manufactured and furnished a similar item, which was accepted for use by any Department of Defense (DOD) activity. The clause defines similar items as "those which execute the same or a similar function within a system, subsystem or assembly."

dynamometer testing was an error that will not be repeated by this office."

Since Jay-Em's disqualification, Allied has been the only approved source for the plug. The government's estimated annual requirements for this part are approximately $32,000. The part is currently procured under a restricted acquisition method code of "3-H," which is assigned to parts that are to be acquired only from the OEM because the government does not possess sufficient or accurate technical data from which to develop adequate technical specifications. See Defense Federal Acquisition Regulation Supplement, Appendix E §§ 201.1; 201.2 (1991).

On July 8, 1994, the agency published a notice in the Commerce Business Daily (CBD), announcing its intention to negotiate a sole-source award to Allied for a quantity of fused plugs. The CBD notice invited other potential sources, who believed they could provide this component, to submit a response to the agency within 45 days. The CBD notice warned that the government could not furnish potential offerors with the specifications, plans, or drawings for the fused plug, because this information was unavailable to the government.

On July 12, the Air Force executed a justification and approval (J&A) for the proposed sole-source award to Allied under the authority of 10 U.S.C. § 2304(c)(1), which allows the use of noncompetitive procedures when the supplies or services needed by the agency are available from only one responsible source. The J&A stated that Allied owned the engineering data for the fused plug considered necessary to qualify another source; that Allied developed the fused plug with its own funds; and that there was no legal basis to challenge Allied's ownership rights in the data. The J&A also stated that another firm was seeking to qualify a wheel assembly and all its components, and could be a future competitor for the fused plug.

The Air Force issued the RFP on August 4 and requested proposals by September 8. The RFP solicited prices for three alternate quantities of plugs: 904 each, 2,359 each, or 4,050 each. The RFP contained a clause entitled, "Notice of Restriction of Sources," which identified Allied as the approved source. The clause stated that the government lacked a complete and adequate technical data package for the solicited part and that "[o]ffers from firms not previously identified as sources . . . will only be considered when it can be determined prior to award that the material or service being offered will meet the Air Force's requirement."

On August 9, the Air Force received a proposal from AES, a small business concern.[2] In its proposal cover letter, AES requested that it be recognized as an approved source for the F-15 fused plug based upon qualification by similarity.[3] AES listed four prior contracts where it provided plugs claimed to be similar to the F-15 fused plug and provided an engineering drawing for its proposed F-15 fused plug. The protester advised that, if the foregoing information was insufficient to qualify its proposed part, it was willing to manufacture a first article for the agency to test and evaluate.

On September 1, the contracting officer asked the project engineer to review AES's request for source approval. On September 8, the engineer responded that, unless AES had previously manufactured the F-15 fused plug as a vendor for Allied, it could not be considered a qualified source for this component. The engineer further stated that qualification testing of the fused plug would require a dynamic demonstration of the part's operability within the entire wheel assembly--testing which was considered prohibitively expensive for a single component given the estimated future needs.[4] On September 12, the contracting officer notified AES of the engineer's findings. This protest followed.

Generally, under the Competition in Contracting Act of 1984 (CICA), a proper basis for a sole-source award exists where only one known responsible source is available to provide the item or service which will satisfy the government's needs. See Hydra Rig Cryogenics, Inc., B-234029, May 11, 1989, 89-1 CPD ¶ 442. In accordance with this principle, a proper basis for a sole-source award exists where adequate data does not exist or is not available to permit conducting a competitive procurement. See Rotek, Inc., B-240252, Oct. 26, 1990, 90-2 CPD ¶ 341; Cytek Corp., B-231786, Sept. 28, 1988, 88-2 CPD ¶ 294. Where an agency has substantially complied with the procedural requirements of CICA, 10 U.S.C. § 2304(f) (1988), mandating written justification for and higher-level approval of the contemplated sole-source action and publication of the

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[2]In its proposal, AES offered a price of $24,300 for 4050 plugs--the purchase quantity ultimately selected by the agency. In comparison, Allied's price for this quantity was $27,864.

[3]The RFP did not contain a clause permitting qualification by similarity.

[4]The Air Force states that such dynamic testing would cost more than $100,000.

required CBD notice, we will not object to the sole-source award unless it can be shown that the award lacks a reasonable basis. Id.

Here, the Air Force has complied with the requirements of CICA at 10 U.S.C. § 2304(f), calling for written justification for and higher-level approval of the contemplated sole-source action and publication of the requisite CBD notice. The propriety of the Air Force's decision therefore depends upon whether it was reasonable to conclude that only one source was available. See Hydra Rig Cryogenics, Inc., supra; TSI Microelectronics Corp., B-243889, Aug. 20, 1991, 91-2 CPD ¶ 172, recon. denied, B-243889.2, Nov. 4, 1991, 91-2 CPD ¶ 423.

The Air Force claims that only Allied can satisfy the requirement for the F-15 fused plug because that firm owns the engineering data for this part. The Air Force states that, without access to the Allied data, it cannot evaluate the acceptability of an alternate fused plug unless it subjects the part to full dynamic testing within a wheel and brake assembly.

AES does not claim that it has access to the OEM data for the F-15 fused plug, but disputes the Air Force's conclusion that such data is necessary to determine the acceptability of its part. Specifically, AES states that it has manufactured similar fused plugs for other aircraft and has gained source approval on this basis, without having to submit its parts for qualification testing.

The Air Force agrees that this may be true for other aircraft where engineering data is available for the fused plug.[5] However, the Air Force states that, absent the requisite engineering data, it is not possible to qualify a wheel and brake assembly, or a component thereof, based upon an offeror's manufacture of "similar" components for other aircraft. This is so, the Air Force explains, because material differences do exist between the wheel and brake assemblies of the various aircraft. Specifically, the agency states that the brakes of the different aircraft generate different energy levels depending upon the weight of the aircraft as well as the size and design of the brake itself. Consequently, the temperature at which the fused plug must activate varies between the different brakes. These differences, according to the Air Force, preclude qualification by similarity. In this regard, the agency points to its failed attempt to qualify Jay-Em's alternate

[5]In its comments on the agency report, AES did not identify whether or not engineering data was available for the other fused plugs for which it gained source approval.

fused plug based upon similarity, revoking the firm's source approval after chemical analyses revealed inconsistencies between the Jay-Em plugs and Allied plugs.

We find that the Air Force had a reasonable basis not to approve AES as a source based upon AES's claim of having manufactured similar items. The record reflects, and AES admits, that the design criteria and performance characteristics of the fused plugs differ between various aircraft; these differences support the Air Force's refusal to qualify a source based upon prior manufacture, particularly in light of the agency's unsuccessful attempt to qualify Jay-Em in this manner. See Electro-Methods, Inc., B-255023.3; B-255023.4, Mar. 4, 1994, 94-1 CPD ¶ 173; TSI Microelectronics Corp., supra.

The protester argues that the Air Force could evaluate the acceptability of its part simply by checking whether a first article produced by AES conformed to the protester's technical drawing. However, without OEM technical data, the Air Force has no basis to assess the validity of AES's technical drawing in the first instance.

The protester nevertheless questions the need for dynamic testing of its fused plug. AES argues that the Air Force could easily test the acceptability of its fused plug without dynamic testing, employing the same simple test procedures used to disqualify Jay-Em's fused plug. The chemical tests performed on the Jay-Em plugs did reveal that their physical characteristics and melting temperatures deviated from the Allied fused plugs. However, these tests were not designed to determine what impact any deviations might have on the performance of the fused plug within a wheel and break assembly. It was for this reason that the Air Force identified a need for dynamic testing to gauge the performance characteristics of the fused plug in harmony with the other components of the wheel and brake assembly. AES has provided no basis for us to question the agency's determination in this regard. See Silco Eng'g & Mfg. Co., B-250012.6, May 7, 1993, 93-1 CPD ¶ 372.

As noted above, the agency estimates that dynamic testing costs over $100,000, whether to qualify an entire wheel assembly or a single component such as the fused plug. Under 10 U.S.C. § 2319 and its implementing regulations, potential offerors, in order to become qualified, must generally bear the cost of testing and evaluation. See 10 U.S.C. § 2319(b)(3) (1988); Federal Acquisition Regulation (FAR) § 9.202(a)(1)(ii). The law also provides that, to rectify a sole-source situation, an agency must bear the cost of qualification testing for small business concerns, where the agency determines that increased competition for future requirements is likely to result in

cost savings sufficient to amortize, within a reasonable period of time, the costs incurred by the agency, considering the duration and dollar value of anticipated future requirements. 10 U.S.C. § 2319(d)(1)(B).

In this case, the Air Force reasonably determined that it should not be required to bear testing costs for AES, a small business, because increased competition for the fused plug is not likely to offset testing costs during the useful life of the F-15 aircraft fleet. Specifically, the agency surmises that competition for the fused plug could yield savings of about $3,000 per year (as reflected by the competition in this case). Assuming a 20-year life expectancy for the F-15 aircraft fleet, competition for the fused plug would ultimately yield savings of about $60,000, well below the $100,000 that would need to be expended in order to qualify the component.

The protest is denied.

\s\ Paul Lieberman
for Robert P. Murphy
General Counsel